

# **Workshop on Mountaintop Mining (MTM) Effects on Groundwater (GW)**

**Charleston, WV  
May 9, 2000**

## **Workshop Objectives**

1. Identify potential impacts of MTM on GW quality and quantity
2. Review existing knowledge and ongoing research that applies to MTM effects on GW. Identify knowledge gaps
3. Review and assess the public comments concerning MTM impacts on GW received during the EIS Scoping Process
4. Identify potential technical and policy actions in light of workshop findings for further consideration during the EIS process

## **Workshop Agenda**

0800 Introduction and Workshop Objectives; Review of Public Comments

0815 Presentation on GW aspects of MTM (Jim Eychaner, USGS): Overview presentation to provide participants with a common understanding of issues under investigation. More detailed presentations will follow. All speakers will assume that participants have a general understanding of groundwater hydrology and MTM operations. Suggested topics include:

- Pre-mining GW hydrology and chemistry
- GW flow through rock fractures
- Blasting; magnitude, proximity, chemistry, immediate and delayed effects
- GW flow through unconsolidated material
- GW monitoring plans and data

0900 Open Discussion: Have we identified all the potential effects?

0915 Presentation on Mining Operator Requirements and Permit Applications (Tom Galya, WVDEP): Present the federal and state permit application requirements relevant to GW effects. Discuss how this information is typically obtained.

Suggested topics include:

- Pre-mining baseline data and analysis
- GW monitoring plans and implementation
- Post-mining closure data and analysis (including time frame since closure)

1000 Open Discussion: Do we understand current operator requirements and limitations?

1015 Break

*Detailed Topical Presentations- The following presenters will deliver a brief (10 to 15 minute) discourse on the topic including what is known, where uncertainty exists, the potential effects on GW quantity and quality, conceivable actions to reduce the uncertainty, and conceivable regulatory changes that would mitigate the effect. Each presentation will be followed by a brief discussion period for the group to add additional information or debate the science and recommendations*

- 1030 Public Concerns of MTM Effect on GW (Rick Eades, WVCAG): Opportunity for selected participant(s) to comment on the public perspective concerning MTM effects on GW and opportunities to mitigate these effects.
- 1100 GW flow through rock fractures (Mark Kozar, USGS): Effect of MTM induced fracture on aquifer hydrology
- 1130 Blasting (Jay Hawkins, OSM): magnitude in MTM operations, unspent explosive material, fracture, effects on well integrity, transient effects on water quality, delayed effects
- 1200 Lunch
- 1300 GW flow through unconsolidated material (David Wunsch, KGS): GW flow through MTM backfill and valley fills, water quality and quantity
- 1330 GW Chemistry Effects (Bob Evans, OSM): effects of MTM disturbance on chemistry throughout the aquifer and watershed
- 1400 GW Monitoring (Bob Evans, OSM): Federal and state specific requirements (WV, KY, VA, TN) and their effectiveness
- 1430 Break
- 1445 Open Discussion on Regulatory Enhancements (Facilitator): What should be required by regulation to address the potential effects compared to what is currently required and what has been received in past applications. Where are the gaps in required data and analysis to make protective decisions on a permit application? Is all the required information necessary?
- 1530 Summarize Proceedings (Facilitator): Present summary recorded throughout day organized in the following format:
- Potential effect on GW quantity and/or quality
  - Recommendations for additional study
  - Recommendations for regulatory enhancement
  - Comments
- 1600 Open Discussion on Recommendations (Facilitator)

1645 Final Comments and Next Steps

1700 Adjourn

**Workshop Logistics**

The workshop will be held in the training room of WVDEP office in Nitro, WV on May 9, 2000. Please be there sufficiently early so that we may start promptly at 0800.

A proceedings will be prepared to capture the presentations, conclusions, and recommendations of the workshop for the EIS Steering Committee and the public. Please provide any prepared remarks in MS Word or simple text format and any presentation material in MS Powerpoint or other electronic format.

POC for comments, concerns, or logistical needs: Carey R. Butler, PE, WPI, (304) 598-9383, x15, [carey\\_butler@mt.wpi.org](mailto:carey_butler@mt.wpi.org)